What is the CTPP?



The CTPP represents a collection of specially designed Census Transportation **Planning Products designed by** transportation planners for transportation planners. Historically, the CTPP has evolved from a single set of special tables into a multi-year program covering a variety of products.



1960 OMB Journey-to-Work Tables

1970 Urban Transportation Planning **Package UTPP**

1980 Urban Transportation Planning Package **Urban Transportation Planning System-UTPS**

1990 Census Transportation Planning Package

2000 Census Transportation CTPP **Planning Package**



2005 Census Transportation Planning Products



What is CTPP 2000?



The Census Transportation
Planning Package 2000 is a set of special tabulations from the long form of the decennial census designed by transportation planners for transportation planners

It summarizes the data



Flows between Home and Work





Who developed it?



CTPP 2000 was a product of the states and MPOs funded through an AASHTO Pooled Fund Project

It was guided by a Working Group

USDOT (FHWA, BTS, FTA and OST)

Census Bureau (Migration and Geography Divisions)

AASHTO

States and MPOs

TRB Subcommittee on Census Data

www.TRBcensus.com

Who paid for it?



	Buyers/Users	Direct Cost	Tables
1960	ОМВ	???	???
1970	112	\$0.6 M	43
1980	152	\$2.0 M	82
1990	All States	\$2.5 M	120
2000	and MPOs	\$3.0 M	203

What are the CTPP 2000 Products?



Main CTPP 2000 Products







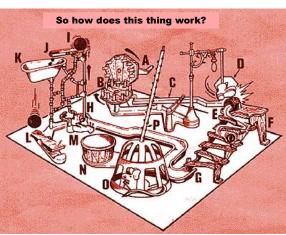
Collateral Products

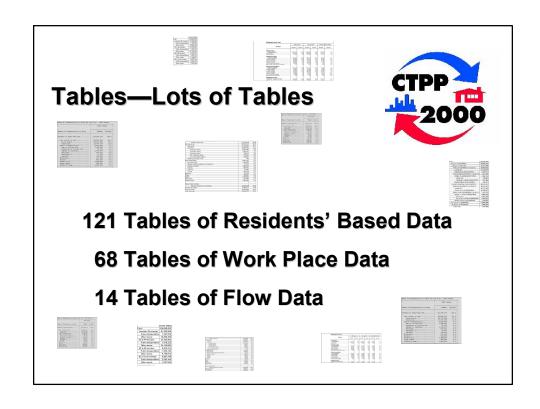
- State and County Profiles
- County Flow Data

What is in CTPP 2000?



Let's Look at the Details





Variables--Lots of Variables



Person and Workers

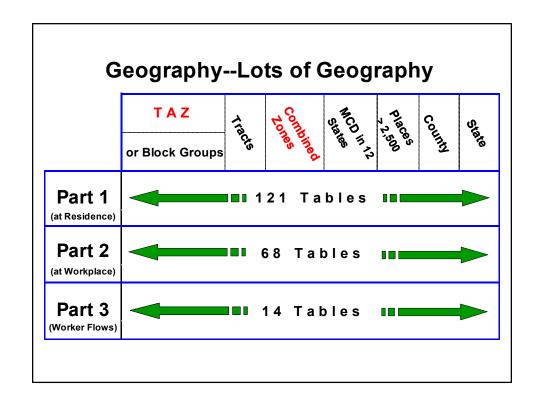
Worker Status Age, Sex, Race, Hispanic Origin, Disability

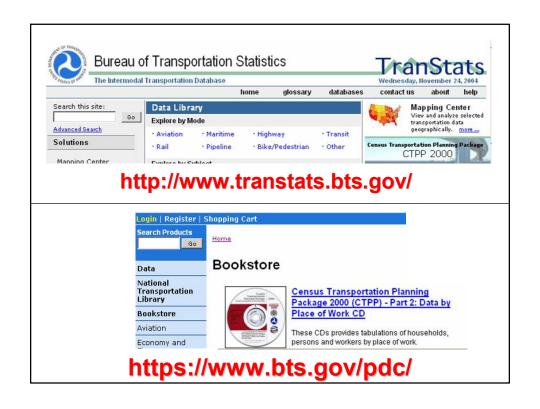
Household

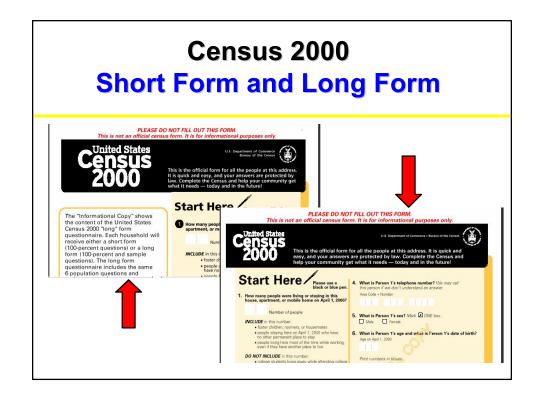
Income
Nos. Vehicles Available
Size and Nos. Workers

Journey-to-Work

Work Location and Mode Departure and Travel Time Arrival Time (Calculated)







Census 2000 **Short Form Questionnaire**

7 Questions

Name Sex Age Relationship **Hispanic Origin Race Owner/Renter Status**

Census 2000 **Long Form Sampling Pattern**













For the U.S. as a whole, about one in six households received the long-form questionnaire.

Transportation Related Questions Long Form

Place of Work

Means of Transportation to Work

Carpool Occupancy to Work

Departure Time for Work



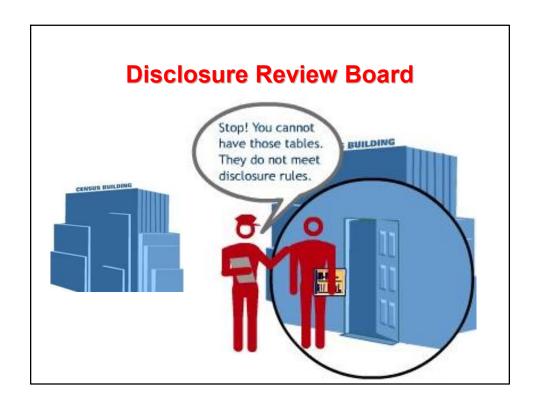


Travel Time to Work



CTPP 2000 Data Issues

Rounding and Thresholds
Workplace Geocoding
Worker Counts
Travel Time Top Coding



CTPP 2000 Post DRB

Part 1: at Residence (121 Tables)

All Tables Rounded

Zero = 0

1 through 7 = 4

8 though ∞ = Nearest Multiple of "5"

Part 2: at Workplace (68 Tables)

All Tables Rounded

Part 3: Worker Flows (14 Tables)

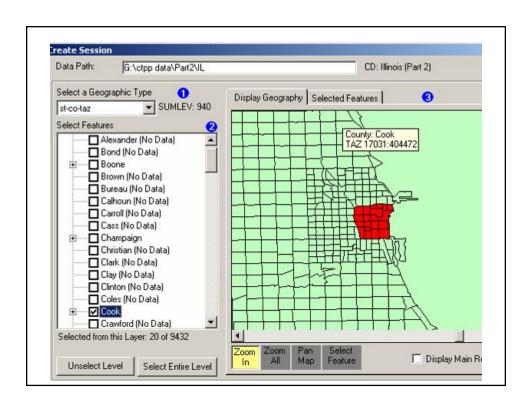
All Tables Rounded

Some Tables with Thresholds

Example of Rounding

Mode to Work	Circa 1990	For 2000 (ROUNDED)
Total	352	350 (not 355!)
Drive Alone	212	210
Carpool	46	45
Transit	59	60
Walk	33	35
Bike	2	4

True Total 354



HISPANIC D		Total,	Hispanic origin (3)				
RACE®		Total, Race of person (5)						
MEANS8← 🗈	Total, Means of	Drove alone	2-person carpool	3-or-more-pers				
GEO_ID 🗈	transportati			carpool				
TAZ 17031:L11423	49,275	12,200	3,000	9				
TAZ 17031:L11428	29,365	8,315	1,780	5				
TAZ 17031:L11446	15,035	3,705	1,015	2				
TAZ 17031:L11448	5,200	3,115	440	1				
TAZ 17031:L11449	25,655	7,240	1,620	5				
TAZ 17031:L12427	920	410	130					
TAZ 17031:L12428	9,610	3,025	675	1				
TAZ 17031:L12446	22,115	4,925	1,440	3				
TAZ 17031:L12449	67,795	14,565	3,640	1,1				
TAZ 17031:L12451	1,130	595	55					
TAZ 17031:L21423	42,370	11,465	2,660	8				
TA7 17031-L01/07	7 000	2 155	con	- 1				

Chicago CBD -CTPP 2000 Data

	Total	SOV	Carpool	Bus	Rail	Other	Home	Row Tot
L11423	49,275	12,200	3,915	6,410	24,580	2,160	10	49,275
L11428	29,365	8,315	2,340	4,210	12,780	1,715	4	29,364
L11446	15,035	3,705	1,240	2,430	7,010	640	15	15,040
L11448	5,200	3,115	550	570	745	150	65	5,195
L11449	25,655	7,240	2,120	2,775	12,325	1,195	0	25,655
L12427	920	410	155	65	85	95	105	915
L12428	9,610	3,025	835	1,660	3,535	555	0	9,610
L12446	22,115	4,925	1,770	4,595	9,915	905	0	22,110
L12449	67,795	14,565	4,820	8,035	36,950	3,420	0	67,790
Rest	124,955	34,255	10,324	17,410	57,165	5,460	328	124,942
								349,896

Col Tot 349,925 91,755 28,069 48,160 165,090 16,295 527

	А	В	С	D	Е	F	G	Н
1								
2	SEX	Total, Sex	(3)					
3	MEANS18	Total, Mea	Drove alo	2-person c	3-person c	4-person c	5-or-6-pers	7-or-more- Bu
4	GEO_ID							
5	Tract 530670101.0	1725	900	115	20	4	0	4
6	Tract 530670102.0	2610	2035	170	35	15	0	4
7	Tract 530670103.0	2780	1710	345	60	50	0	0
8	Tract 530670104.0	1735	1285	115	10	10	0	0
9	Tract 530670105.0	3475	2315	435	55	40	10	15
10	Tract 530670106.0	2975	2080	320	4	10	15	0
11	Tract 530670107.0	2330	1885	225	35	20	15	4
12	Tract 530670108.0	3145	2370	345	50	10	10	0
13	Tract 530670109.0	4695	3730	495	65	10	4	0
14	Tract 530670110.0	2540	2190	90	0	0	10	0
15	Tract 530670111.0	1350	1055	145	30	4	0	0
16	Tract 530670112.0	2090	1575	170	0	0	10	0
17	Tract 530670113.0	1535	1130	240	0	10	0	0
18	Tract 530670114.1	2395	1825	175	95	25	0	4
19	Tract 530670114.2	3140	2430	440	50	0	4	0
20	T 500070445 0	n / 2500	4000	105		ાની	^ ^	40

	А	В	C	D	Е	F	G	Н
1								
2	SEX	Total, Sex	(3)					
3	MEANS18	Total, Mea	Drove alon	2-person c	3-person c	4-person c	5-or-6-pers	7-or-more- Bu
4	GEO_ID							
5	Tract 530670101.0	1725	900	115	20	4	0	4
6	Tract 530670102.0	2610	2035	170	35	15	0	4
7	Tract 530670103.0	2780	1710	345	60	50	0	0
8	Tract 530670104.0	1735	1285	115	10	10	0	0
9	Tract 530670105.0	3475	2315	435	55	40	10	15
10	Tract 530670106.0	2975	2080	320	4	10	15	0
11	Tract 530670107.0	2330	1885	225	35	20	15	4
12	Tract 530670108.0	3145	2370	345	50	10	10	0
13	Tract 530670109.0	4695	3730	495	65	10	4	0
14	Tract 530670110.0	2540	2190	90	0	0	10	0
15	Tract 530670111.0	1350	1055	145	30	4	0	0
16	Tract 530670112.0	2090	1575	170	0	0	10	0
17	Tract 530670113.0	1535	1130	240	0	10	. 0	0
18	Tract 530670114.1	2395	1825	175	95	25	0	4
19	Tract 530670114.2	3140	2430	440	50	0	4	0
20	T CO0070445 0		1000	105		141	1 0	10

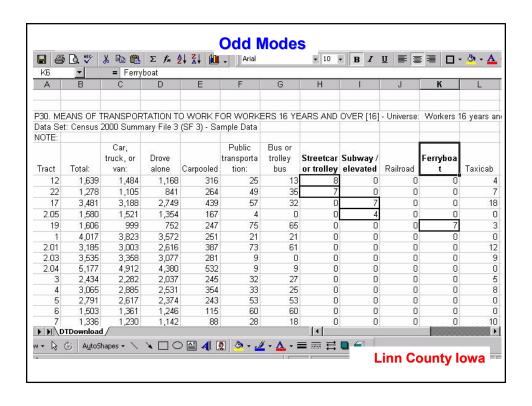
Rounding Tips

- 1. Obtain your "regional control totals" from the most geographically aggregate summary levels
- 2. Avoid aggregating (summing together) your geographies
- 3. Avoid aggregating categories
- 4. Sum as few categories as possible
- 5. Adjust (de-round, un-round) as you see fit. SF3 or PUMS can provide control totals to adjust the CTPP Part 1 data.
- 6. Develop a sense of humor.

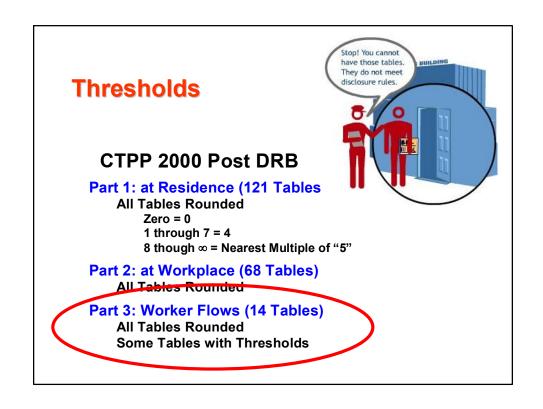
So is it "close enough for government work?"

	Mod	e to work	c 1	for Thur	ston Res	ic	dents	
	SF3	CTPP		SF3	CTPP		SF3	CTPP
Tract	To	tal:		Car, truc	k, or van:		Drove	alone
101	1,727	1,725		1,047	1,043		900	900
102	2,608	2,610		2,259	2,259		2,037	2,035
103	2,782	2,780		2,158	2,165		1,708	1,710
104	1,733	1,735		1,420	1,420		1,283	1,285
105	3,473	3,475		2,868	2,870		2,314	2,315
106	2,974	2,975		2,432	2,429		2,080	2,080
107	2,332	2,330		2,180	2,184		1,884	1,885
108	3,144	3,145		2,789	2,785		2,371	2,370
109	4,697	4,695		4,310	4,304		3,732	3,730
110	2,539	2,540		2,287	2,290		2,190	2,190
111	1,352	1,350		1,235	1,234		1,054	1,055
112	2,091	2,090		1,751	1,755		1,575	1,575
113	1,533	1,535		1,383	1,380		1,132	1,130
114.1	2,394	2,395		2,130	2,124		1,827	1,825
123.3	1,866	1,865		1,766	1,765		1,582	1,580
124.1	3,410	3,410		3,116	3,119		2,589	2,590
124.2	1,848	1,850		1,765	1,759		1,575	1,575
125	4,402	4,400		4,060	4,065		3,411	3,410
126	3,910	3,910		3,673	3,670		3,222	3,220
127	4,862	4,860		4,496	4,499		3,753	3,755
	400.000	400.005		00.744	00.720		77.000	77.005
	100,986	100,985		90,741	90,728		77,933	77,925
		-0.001%	l		-0.014%			-0.010%

	Means of	Transpor	tation to \	Work for C	range Co	ounty (FL)	Resident	S	
Tun a4	То	tal	Car, truck, van		Drove	Alone	Public Trans		
Tract	SF3	CTPP	SF3	CTPP	SF3	CTPP	SF3	CTPP	
101	133	135	77	74	71	70	25	2	
102	2,440	2,440	2,098	2,095	1,981	1,980	45	3	
103	1,527	1,525	1,349	1,345	1,181	1,180	34	3	
104	489	490	270	264	202	200	168	17	
105	635	635	327	330	294	295	221	20	
106	1,127	1,125	512	510	352	350	392	39	
107.01	340	340	314	315	264	265	0		
178.04	2,650	2,650	2,487	2,485	2,032	2,030	<u>_</u>		
178.05	1,334	1,335	1,249	1,250	1,119	1,120	0		
178.06	2,668	2,670	2,456	2,455	2,201	2,200	12	1	
178.07	1,722	1,720	1,581	1,573	1,352	1,350	33	3	
178.08	1,652	1,650	1,554	1,550	1,426	1,425	0		
179.01	1,084	1,085	1,062	1,068	918	920	0		
179.02	1,653	1,655	1,466	1,465	1,264	1,265	15	1	
	439,323	439,350	404,604	404,546	351,068	351,050	10,923	10,54	
Γ	0.00	61%	- 0.01	43%	- 0.00	51%	-3.4972%		



	D. ABC	X 10 00	Σf_{x}	A XI IO	Arial		10	• B I	<u>n</u> ≡ ≡		· → A
A1 A	B		D	Е	F	G	Н	1	J	K	L
		TRANSPOR 2000 Summ				ERS 16 YE	ARS AND	OVER [16]	- Universe:	Workers 1	l6 years a
Tract	Total:	Car, truck, or van:	Drove alone	Carpooled	Public transport ation:	Bus or trolley bus	Streetcar or trolley	Subway / elevated	Railroad	Ferryboat	Taxicab
12	1,639	1,484	1,168	316	25	13	8	0	0	0	4
22	1,278	1,105	841	264	49	35	7	0	0	0	7
17	3,481	3,188	2,749	439	57	32	0	7	0	0	18
2.05	1,580	1,521	1,354	167	4	0	0	4	0	0	C
19	1,606	999	752	247	75	65	0	0	0	7	3
1	4,017	3,823	3,572	251	21	21	0	0	0	0	
2.01	3,185	3,003	2,616	387	73	61	0	0	0	0	12
2.03	3,535	3,358	3,077	281	9	0	0	0	0	0	9
2.04	5,177	4,912	4,380	532	9	9	0	0	0	0	- 0
3	2,434	2,282	2,037	245	32	27	0	0	0	0	5
4	3,065	2,885	2,531	354	33	25	0	0	0	0	8
5	2,791	2,617	2,374	243	53	53	0	0	0	0	
6	1,503	1,361	1,246	115	60	60	0	0	0	0	
7	1,336	1,230	1,142	88	28	18	0	0	0	0	10
december become	TDownload	4 /					[4]				Þ



	Part 3: Worker Flow Tables	
able	Content	
1	Total Workers (1)	No record
2	Vehicles Available (3zero,one or two+) by Means of Transpor	threshold
3	Poverty Status (3 categories)	
4	Minority Status (2white non-hispanic and all other	Must have 3
5	Household Income (8 classifications)	unweighted
6	Means of Transportation (17 modes)	records
7	Household Income (4 classifications) by Means of Transport	ation (4 modes)
8	Mean Travel Time by Means of Transportation to Work (7 m Leaving Home for Work (2–AM peak and all other tim	
9	Median Travel Time by Means of Transportation to Work (7 r Leaving Home for Work (2 groupings)	nodes) and Time
10	Aggregate Number of Vehicles by Time Leaving Home for W	ork (2, see table 8)
11	Number of Workers per Vehicle by Time Leaving Home for W	ork (2, see table 8)
12	Aggregate Number of Carpools by Time Leaving Home for W	ork (2, see table 8)
13	Number of Workers per Carpool by Time Leaving Home for W	/ork (2, see table 8)

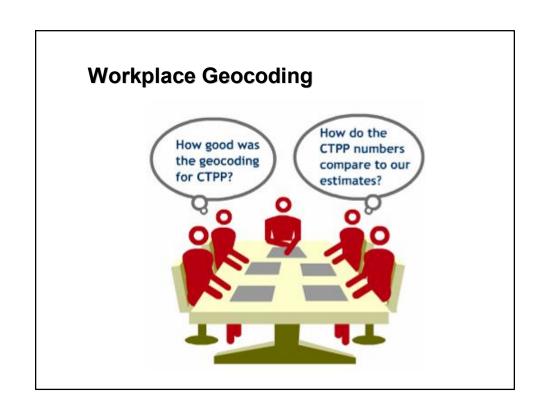
Unweigh	ed Record	is		
	Home A	Home B	Home C	Home (
Work A	25	10	2	0
Work B	10	25	10	10
Work C	0	10	25	10
Work D	0	10	10	25
E	Home A	Work A	# Record 25	S
	A	В	10	8
	A	C	0	
	A	D	0	
	В	Α	10	
	В	В	25	
	_C	Α	2	

DRB Impact on Part 3

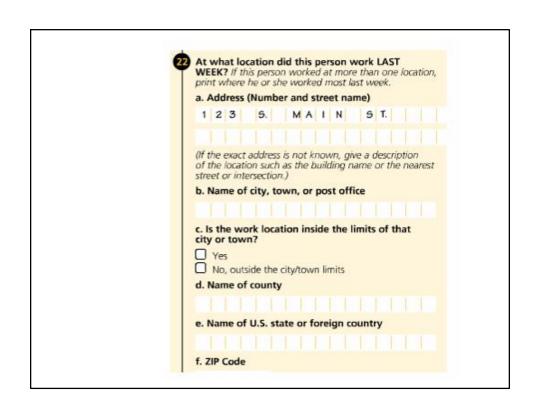
Intra-Bay Area, CTPP 2000, Part 3 Analysis

	Table : No Thres		Table 3-6 w/ Thresholds		
County-to-County	3,258,465	Loss	3,258,465	Loss	
Place-to-Place	3,257,152	0.0%	3,221,359	-1.1%	
Tract-to-Tract	3,209,952	-1.5%	2,154,754	-33.9%	
Zone-to-Zone	3,143,432	-3.5%	937,749	-71.2%	

Special Thanks to Chuck Purvis, MTC For this Analysis



	active duty in the	id this person work? If now on e Armed Forces, mark (2) this box → □ anch of the Armed Forces.
	Name of compa	any, business, or other employer
	Starb	u c k s
	2	At what location did this person work LA WEEK? If this person worked at more than o print where he or she worked most last week
	b. What kir Describe the example: ho house, auto	a. Address (Number and street name)
		(if the exact address is not known, give a des of the location such as the building name or street or intersection.)
	1000	b. Name of city, town, or post office
		Lakeview,
	c. Is this ma Manufac Wholesa Retail tra Other (a)	c. Is the work location inside the limits of city or town? Yes No, outside the city/town limits d. Name of county
	governn	Washington
28	Occupation	e. Name of U.S. state or foreign country



Workplace Geocoding



Workplace Geocoding Issues

Extended Allocation (25%)

TIGER Improvements (TAZ Definition)

Work-up

75% Geocoded (machine automated and clerical)

15% Standard allocation procedures

10% Imputed Allocation (ala Lemoges)

Workers at Work Counts vs. Other Employment Sources



Total jobs are HIGHER than CTPP worker counts

CTPP uses NAICS, others may use SIC

Multi-site businesses and job types not reported consistently

Census 2000 employment estimates vs CPS

Extended Allocation for CTPP small areas

http://www.trbcensus.com/articles/ctppworkers.pdf

Top Coding of Travel Time

The top coding of travel time changed between 1990 and 2000. In 1990, the data field for travel time was limited to 2 digits thereby restricting travel time to a maximum of 99 minutes. In 2000, the field was 3 digits with a top coding of 200 minutes.

Top Coding

Worker	2000	1990		
	Travel Time in minutes			
1	200	99 14 23 6 15 20		
2	14			
3	23			
4	6			
5	15			
6	20			
7	12	12		
8	8	8		
avg	27.3	24.6		

	Average travel time to work (in mins.)							Percent of	
Geographic Area	1980 Census	1990 Census	Census 2000	Change, 1980 to 1990 (in mins.)	Change, 1990 to 2000 (in mins.)	Estimated avg. travel time in 2000 using max. time of 99 minutes	Difference, Census 2000 minus estimated 2000	Difference, estimated 2000 avg. travel time minus 1990 Census	1990 Census to Census 2000 difference due to processing change
US Total	21.7	22.4	25.5	0.7	3.1	24.6	0.9	2.2	29.09
Alabama	21.6	21.2	24.8	-0.4	3.6	23.6	1.2	2.4	33.39
Alaska	16.1	16.7	19.6	0.6	2.9	18.2	1.4	1.5	48.39
Arizona	20.5	21.6	24.9	1.1	3.3	24.0	0.9	2.4	27.39
Arkansas	18.4	19.0	21.9	0.6	2.9	20.9	1.0	1.9	34.59
California	22.4	24.6	27.7	2.2	3.1	26.7	1.0	2.1	32.39
Colorado	20.1	20.7	24.3	0.6	3.6	23.4	0.9	2.7	25.09
Connecticut	20.6	21.1	24.4	0.5	3.3	23.6	0.8	2.5	24.29
Delaware	19.8	20.0	24.0	0.2	4.0	23.1	0.9	3.1	22.59
District of Columbia	20.0	27.1	20.7	1.0	2.6	20.0	0.0	1.7	24.60
Florida	20.9	21.8	26.2	0.9	4.4	25.1	1.1	3.3	25.09
Georgia	21.0	22.7	27.7	0.0	5.0	28.5	1.2	2.0	24.00
Hawaii	21.5	23.8	26.1	2.3	2.3	25.4	0.7	1.6	30.49
Idaho	16.2	17.3	20.0	1.1	2.7	19.2	0.8	1.9	29.69
Illinois	24.4	25.1	28.0	0.7	2.9	27.1	0.9	2.0	31.09
Indiana	19.5	20.4	22.6	0.9	2.2	21.8	0.8	1.4	36.49
lowa	15.4	16.2	18.5	0.8	2.3	17.7	0.8	1:5	34.89
Kansas	16.5	17.2	19.0	0.7	1.8	18.3	0.7	1.1	38.99
Kentucky	21.0	20.7	23.5	-0.3	2.8	22.5	1.0	1.8	35.79
Louisiana	23.1	22.3	25.7	-0.8	3.4	24.0	1.7	1.7	50.09
Maine	47.0	40.0	20.7	- 4.4	27	24.7	4.0	2.7	27.00
PDF 008	unde	r PD	F di	recto	ory (on Gi	uidek	ook	CD
Michigan	20.5	21.2	24.1	0.7	2.9	23.2	0.9	2.0	

When I get my CTPP data what should I do?

Examine the data

Check its reasonableness

Does it make sense?
Are people working where they should be?
Do the tables add up?

Report all data issues to Nanda Srinivasan, FHWA, (Phone 202-366-5021, email nanda.srinivasan@fhwa.dot.gov)

Stay Connected



http://www.dot.gov/ctpp

http://www.TRBcensus.com

202-366-5000

Are You on the CTPP-News Listserve?

Have You Seen our Newsletter (the Status Report)?